



November 29, 2010

DEPARTMENT OF COMMERCE
SAFETY AND BUILDINGS DIV
JERRY THOMPSON
201 W. WASHINGTON AVE
MADISON WI 53701

Re: Description: ALTERNATE SYSTEM
Manufacturer: DEPARTMENT OF COMMERCE
Product Name: ALTERNATE PLUMBING SYSTEM, WATERHEATER SIZING METHOD
Model Number(s): ALL
Product File No: 20090426

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an alternate approval to s. Comm 82.40 (6) based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of November 2015.

This alternate approval is contingent upon compliance with the following stipulation(s):

- The minimum flow rate of a water heater may be obtained by multiplying the calculated hot water gpm demand as determined by Table 82.40-1b and Table 82.40-3 by 0.65.
- This sizing method may only be utilized on 1 and 2 family residences, Townhouses, and apartments with individual water heaters.
- A tank-type heater flow rate shall be based on a 10 minute draw time. Based on 70% usable storage plus the recovery rate. Example is as follows:

40,000 BTU/ 40 & 50 GAL GAS W.H.

40 GAL W.H. X .70 USABLE GAL / 10 MIN =	2.8 GPM
80 DEGREE RISE 45.5 GPH / 60 MIN = .76	.76
	3.56 GPM
	2.8 GPM
70 DEGREE RISE 51.9 GPH / 60 MIN = .87	.87
	3.67 GPM
50 GAL W.H. X .70 USABLE GAL / 10 MIN =	3.5 GPM
80 DEGREE RISE 45.5 GPH / 60 MIN = .76	.76
	4.26 GPM
	3.5 GPM
70 DEGREE RISE 51.9 GPH / 60 MIN = .87	.87
	4.37 GPM

- A tank-less type heater shall be based on a temperature rise that will achieve 110 degrees at the terminal fitting or faucet.
- This alternate is NOT to be used for sizing the hot water distribution PIPING. It is intended to size the water heating device ONLY.
- This alternate sizing method may not be utilized for sizing a water heater serving a high flow fixture, hose bibb, hydrant or a fixture that requires more than a 1/2" supply. For these specified types of outlets, the full demand, based on the water sizing methods per Comm 82.40 (7) shall be used.

Note: High flow fixtures are defined as fixtures that exceed a flow rate of 4 gpm @ 80 psi, and water velocity not exceeding 8 ft per second.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Jerry Thompson
Plumbing Product Reviewer
Phone: 608-266-6742
Fax: 608-267-9566
E-mail: jerry.thompson@wi.gov